## ABSTRACT OF THE DISCLOSURE

A semiconductor integrated circuits can send and receive signals to and form a configuration memory. The semiconductor integrated circuits is provided therein wiht an instruction memory, an instruction storage portion that stores reserved instructions as F instructions, and stores the substantially equivalent processing contents to the F instructions as substitute instructions for processing by the CPU, a pre-fetch portion, a history storage portion, a diagnosing portion for diagnosing the types of instructions, a reprogramming control portion for reprogramming the instructions, a CPU, an FPGA, a configuration data memory, a built-in memory, and a configuration data tag. When the configuration data of the F instruction does not exist in the FPGA, the substantially equivalent processing by FPGA is executed by the CPU by making use of the substitute instructions.